

54Mbps USB Wireless Adapter

User Manual

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Revision History

Revision	Updated	Notes

Introduction

Thank you for purchasing the Wireless Adapter. This Wireless Adapter is easy to use and easy to setup. If you are tired of all those messy wires needed to connect a lap-top to your Home network, and then take your networking to the next level with the Wireless Adapter. You will be able to share files, printers and even your High-Speed Internet access wirelessly.

Package Contents

Make sure the following items came in this package:

- Wireless Adapter
- Wireless Adapter Installation and User's Manual CD

Minimum System Requirements

- Microsoft Windows XP, or Windows 2000 installed

Connecting the Wireless Adapter


- 1.** Your computer can be on or off; it will not affect the installation process. Locate an available USB slot on your PC. If you are not sure where this may be, please consult your computer's User Manual.
- 2.** Insert the Wireless Adapter into the appropriate USB slot. Your hardware is now installed.

Status LEDs

LED Status	MEANING WLAN card activity
LED1 on (Red)	Connect with Access Point
LED1 off	All other status
LED2 speed blink (Orange)	Data Transferred / Data Received
LED2 blink (Orange)	Scanning for the Access Point

Installing the Wireless Adapter

Windows XP

 **NOTE:** If you have installed the Wireless Adapter driver before, please uninstall the old version first.

Install the Wireless Adapter Driver and Utility

1. After you have installed the Wireless Adapter your computer will display a **Found New Hardware Wizard** screen, click "**Cancel**" to continue.



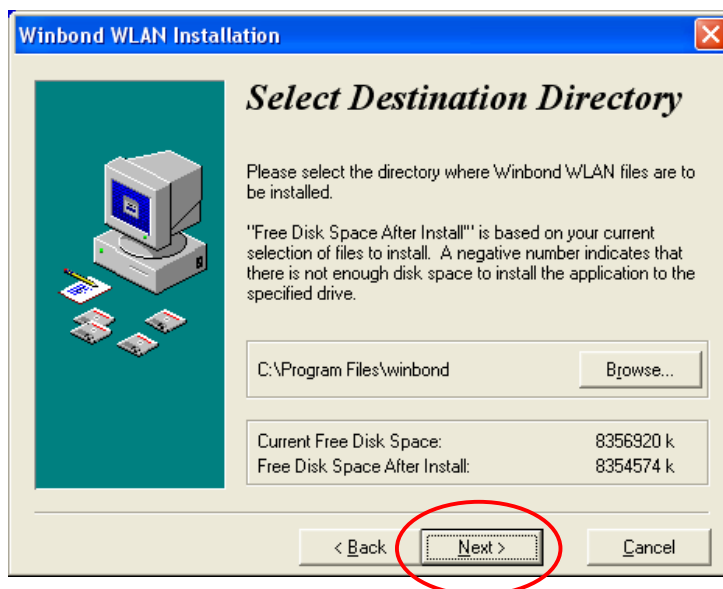
2. Insert Installation CD into your CD-ROM, then the installation will be activated automatically. If not, double-click on "**w89c35.EXE**" on the installation CD.



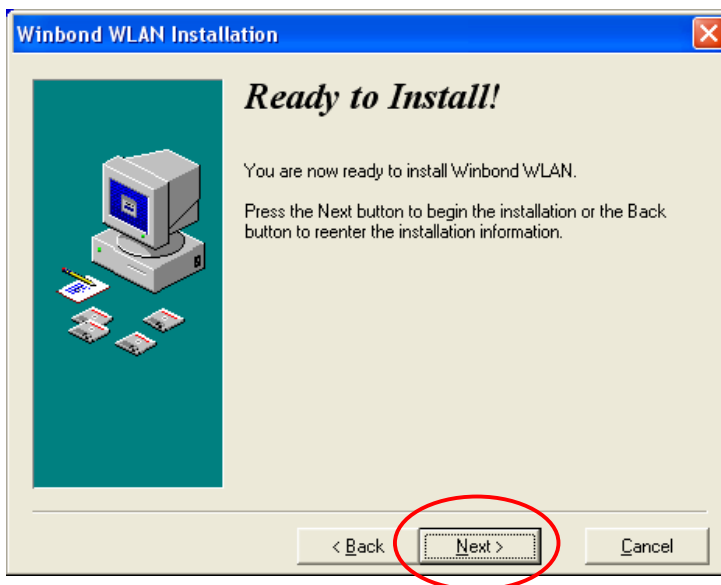
3. **Winbond Wireless Setup** will install the driver and utility on your system, click "**Next**" to continue.



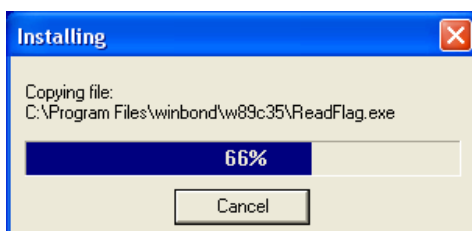
4. On the **Select Destination Directory** screen, click "**Next**" to accept the Destination Directory for driver installation.



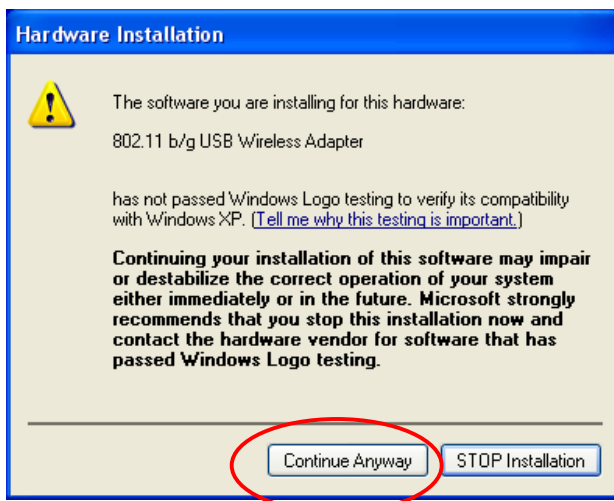
5. Press the "Next" button to begin the installation.



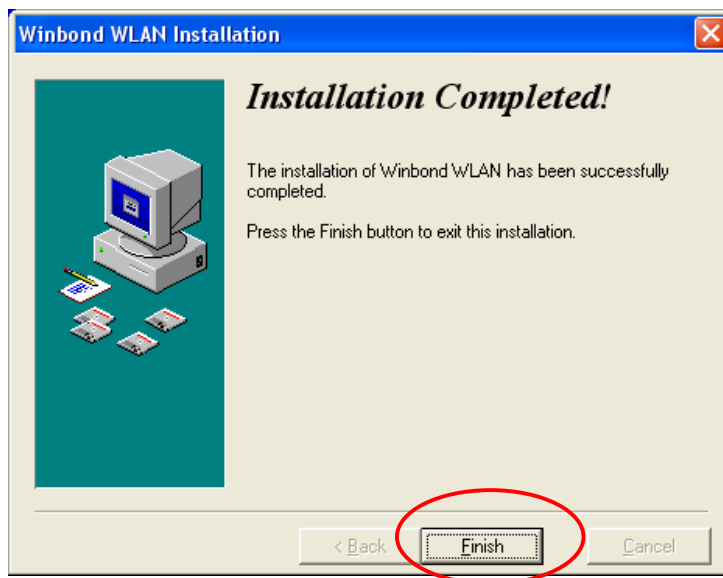
6. Wireless Adapter Driver and Utility are installing.




7. If you see the Windows Logo testing message, below, please press "Continue Anyway" to proceed.



8. The installation is now complete, please click "**Finish**".



NOTE:

When you complete the installation, the utility icon  will appear on the system tray. If not, it means that the installation failed. Please uninstall the driver and repeat the process.

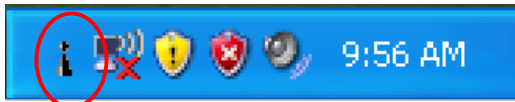
Configuring the Wireless Utility



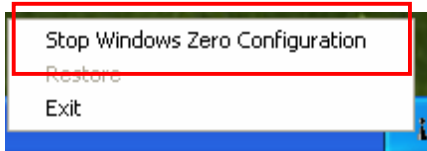
NOTE:


If you have installed the **Windows XP Service Pack 2**. You can use the Windows Zero Configuration for Wireless Configuring. Please see the **Windows XP User Guide**.

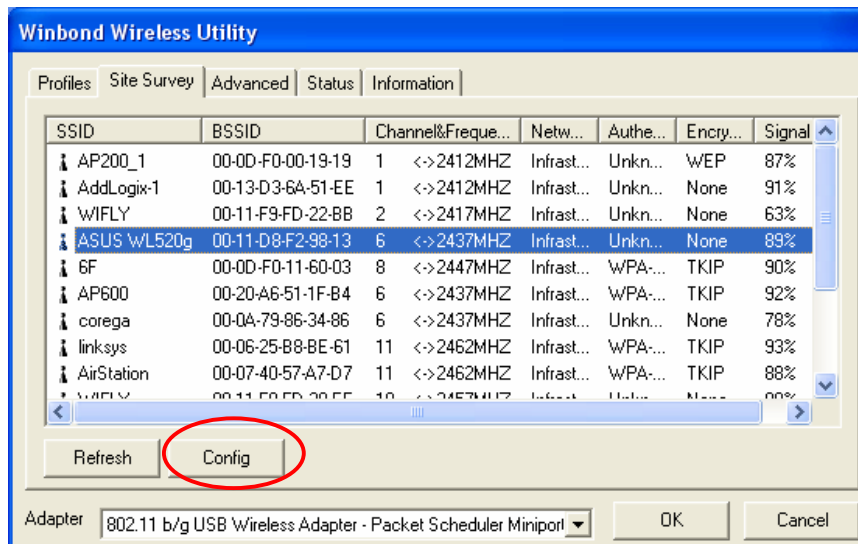
1. On the **Notification Area**, right-click the **Winbond Utility** icon.



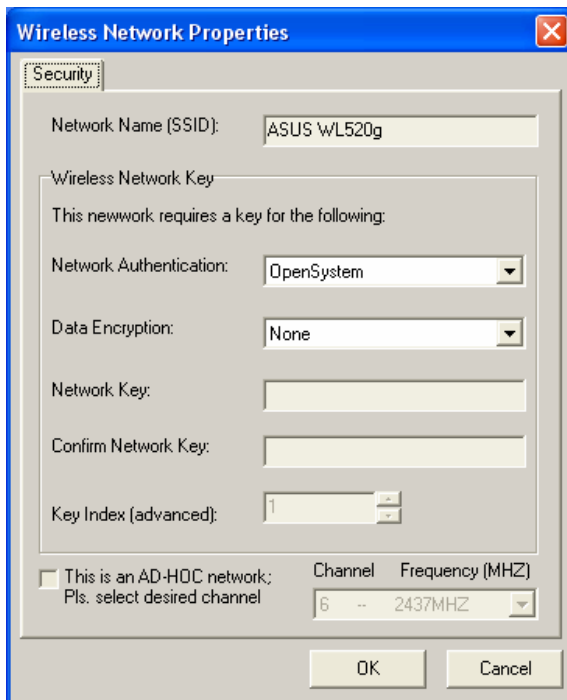
2. **Winbond Utility Selection** screen will be displayed, click "**Stop Windows Zero Configuration**".



3. Double-click the utility icon  in your system tray to begin the utility configuration. Select **Site Survey Tab**, all available Access Points would be listed. Click on the desired Access Point, and click the "**Config**" button for Wireless configuring.



4. On the **Wireless Network Properties** screen, you may set Network Name (SSID), Wireless Network Security Key or AD-HOC network.

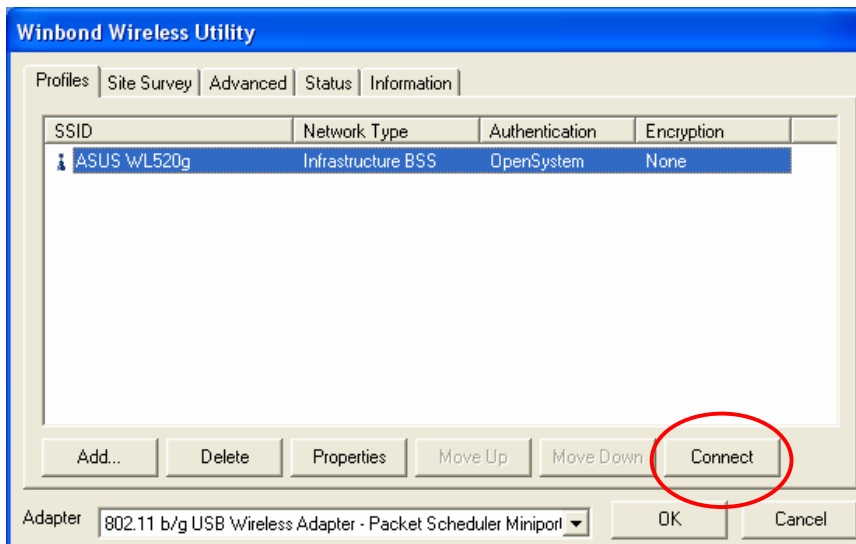


The **Wireless Network Properties** dialog box is shown with the **Security** tab selected. It contains the following fields and options:

- Network Name (SSID):** ASUS WL520g
- Wireless Network Key:** This network requires a key for the following:
 - Network Authentication:** OpenSystem
 - Data Encryption:** None
 - Network Key:** (empty text box)
 - Confirm Network Key:** (empty text box)
 - Key Index (advanced):** 1
- ☐ **This is an AD-HOC network; Pls. select desired channel**
 - Channel:** 6
 - Frequency (MHZ):** 2437MHZ

Buttons: OK, Cancel

5. Click on the desired profile, and click the **"Connect"** button to take effect.



The **Winbond Wireless Utility** window is shown with the **Profiles** tab selected. It displays a table of network profiles:

SSID	Network Type	Authentication	Encryption
ASUS WL520g	Infrastructure BSS	OpenSystem	None

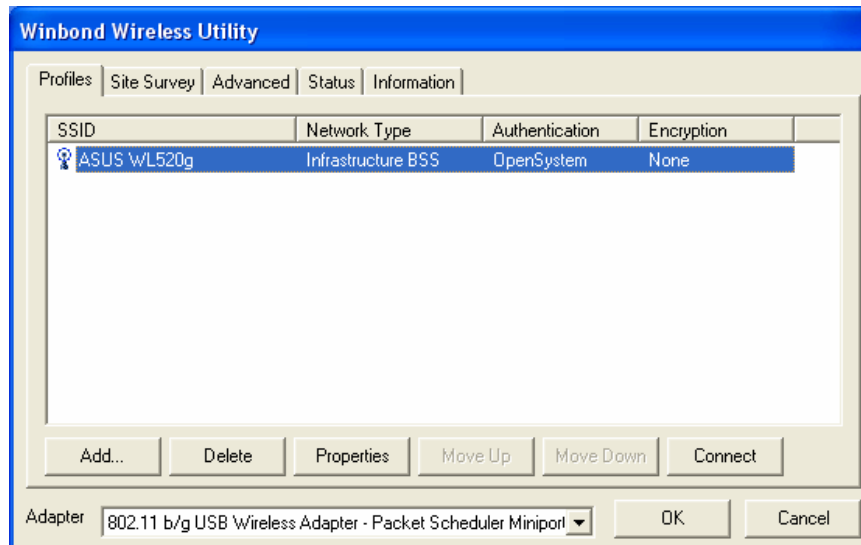
Buttons: Add..., Delete, Properties, Move Up, Move Down, **Connect** (circled in red), OK, Cancel

Adapter: 802.11 b/g USB Wireless Adapter - Packet Scheduler Miniport

Configuration

● Profile

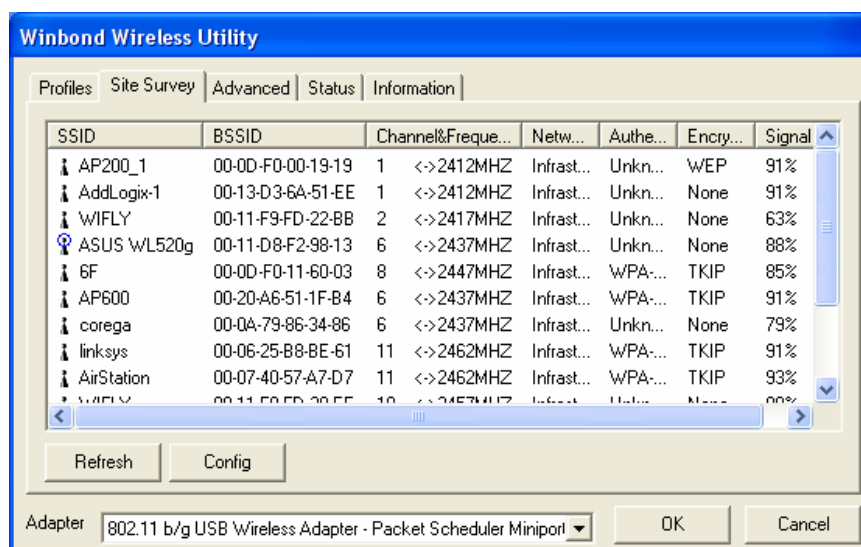
The **Profile Tab** allows you to set values for all parameters by selecting a previously defined profile. To create a profile, click **Add**, type a profile name and set the corresponding parameters. If one of the profiles is no longer used, you may remove it by clicking the **Delete** button. After changing parameters, click the **Connect** button to take effect. You can have multiple profiles and modify the profile at any time.



● Site Survey

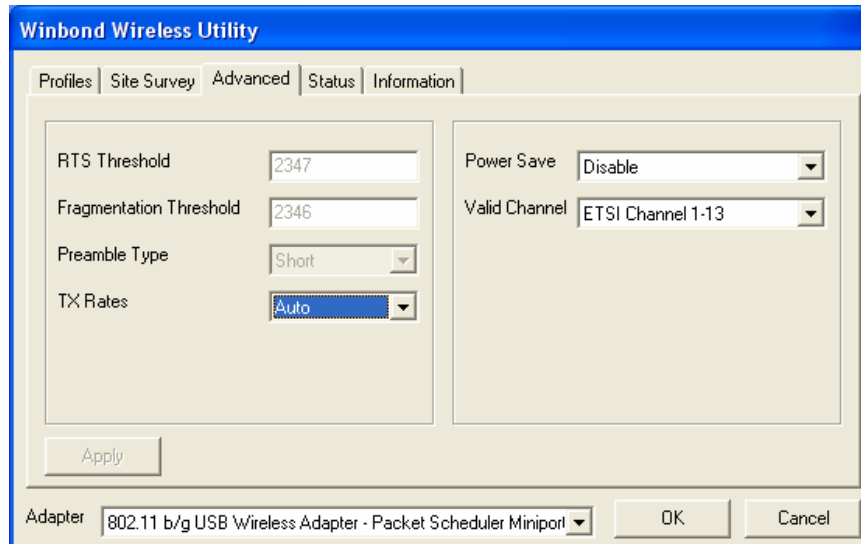
Site Survey Tab lists the features of the available Access Points within range of the Wireless Adapter's signal.

Click on the desired Access Point, and click **Config** for Wireless Configuration. You may click **Refresh** to refresh the list.



- **Advance**

The Configuration Utility also offers the advanced configuration for user to set the Wireless Adapter under certain network environment. These advanced options include RTS Threshold, Fragmentation Threshold, Preamble Type, Tx Rate, Power Save, and Valid Channel.



The image shows the 'Winbond Wireless Utility' window with the 'Advanced' tab selected. The window has a blue title bar and a tabbed interface with 'Profiles', 'Site Survey', 'Advanced', 'Status', and 'Information'. The 'Advanced' tab contains two columns of settings. The left column includes 'RTS Threshold' (text box with '2347'), 'Fragmentation Threshold' (text box with '2346'), 'Preamble Type' (dropdown menu with 'Short'), and 'TX Rates' (dropdown menu with 'Auto'). The right column includes 'Power Save' (dropdown menu with 'Disable') and 'Valid Channel' (dropdown menu with 'ETSI Channel 1-13'). Below these settings is an 'Apply' button. At the bottom of the window, there is an 'Adapter' dropdown menu showing '802.11 b/g USB Wireless Adapter - Packet Scheduler Miniport', and 'OK' and 'Cancel' buttons.

Setting	Value
RTS Threshold	2347
Fragmentation Threshold	2346
Preamble Type	Short
TX Rates	Auto
Power Save	Disable
Valid Channel	ETSI Channel 1-13

Adapter: 802.11 b/g USB Wireless Adapter - Packet Scheduler Miniport

- **Status**

Network Name

The field shows the association status to available Access Point with SSID of the Access Point.

Link Status

Shows the whether the link is Connect or Disconnected.

Current Channel

Shows the channel on which the connection is made.

Current Speed

Shows the highest transmit rate of the current association.

Link Quality / Signal Strength

The Link Quality and Signal Strength bar graph is only active when the node is in Infrastructure Mode. The bar graph displays the quality and strength of the link between the node and its Access Point.

Signal Noise

This displays the noise level of the link between the node and its Access Point.

The screenshot shows the 'Winbond Wireless Utility' window with the 'Status' tab selected. The window displays various network parameters and signal metrics.

Network Name	ASUS WL520g
Link Status	Connected
Current Channel	6
Current Speed	36.0M
Link Quality	94%
Signal Strength	-59dBm
Signal Noise	-94dBm

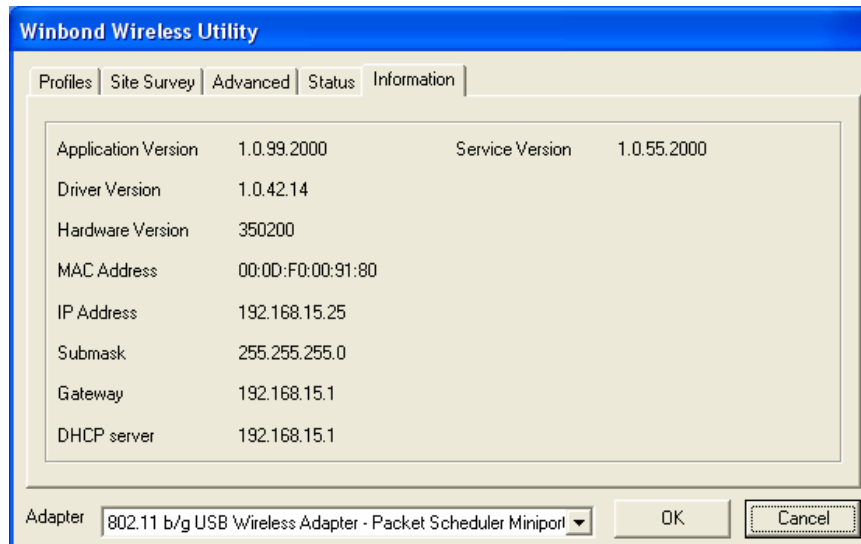
Frames	Tx	Rx
Successful	129	90
Unsuccessful	0	0
Throughput	220 B/s	0 B/s

Buttons: ☒ Radio On ☐ Radio Off

Adapter: 802.11 b/g USB Wireless Adapter - Packet Scheduler Miniport

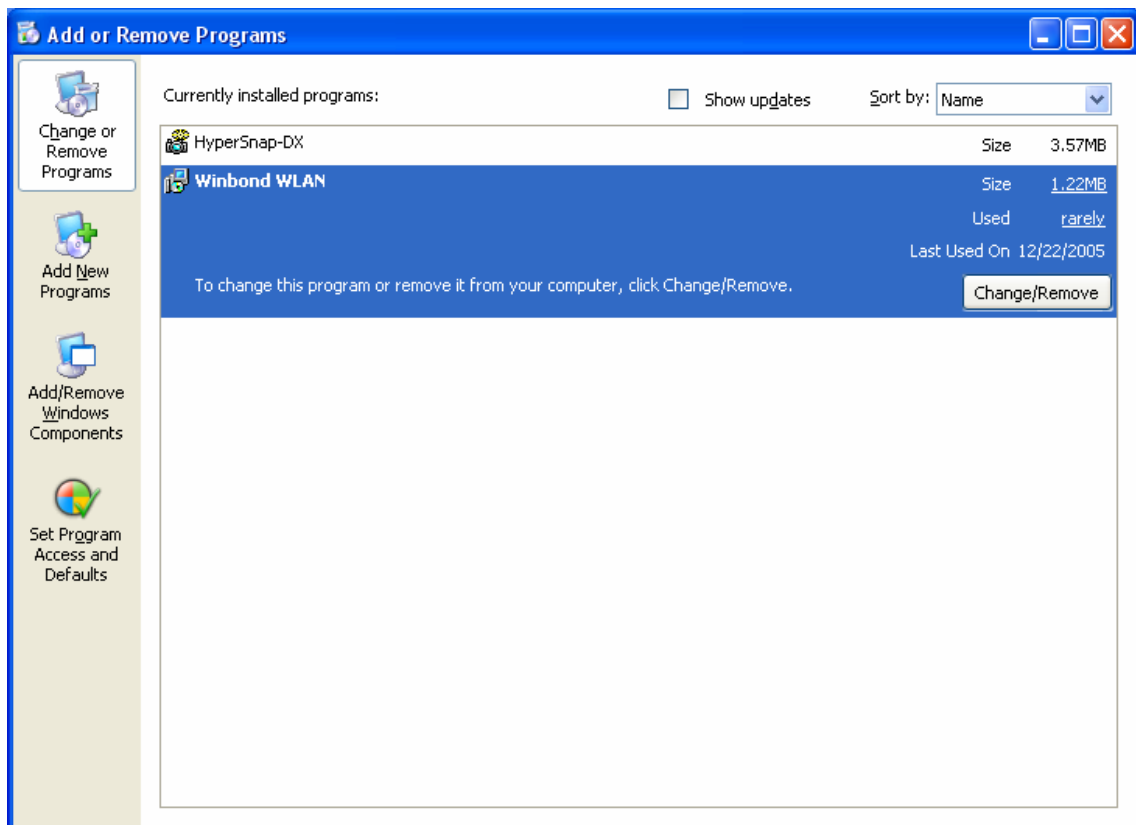
- **Information**

About Tab shows the product version including the detail of Configuration Utility, Driver, and NIC MAC Address.

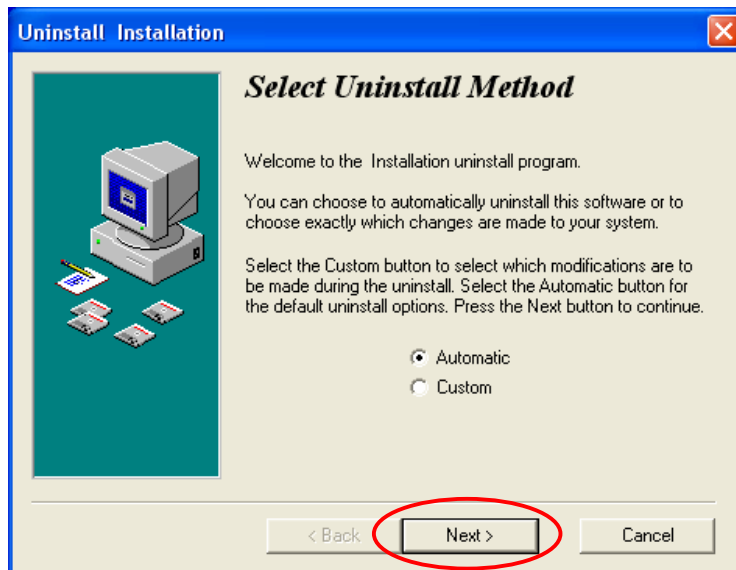


Uninstalling the Wireless Adapter Driver and Utility

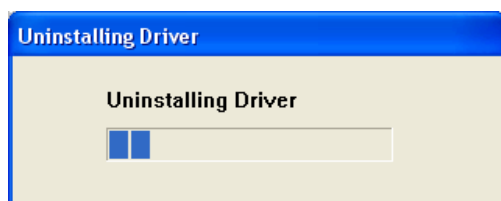
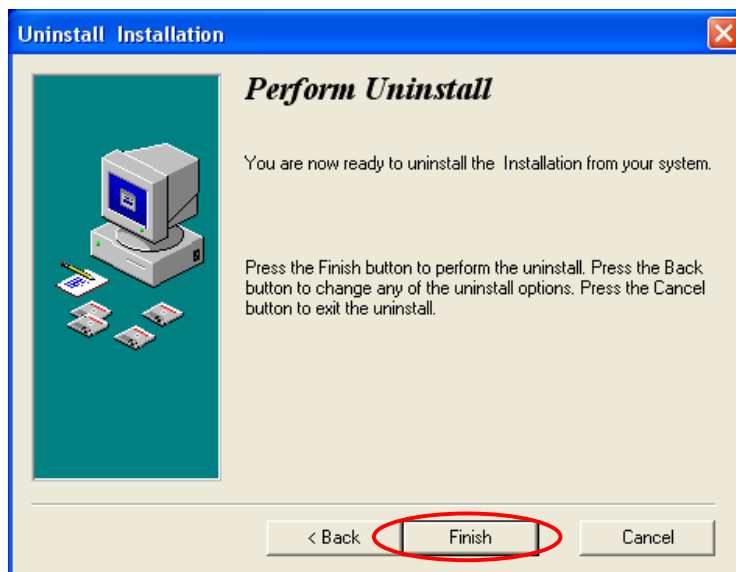
1. For uninstalling the Wireless Adapter, please go to: **Start->Settings->Control Panel->Add or Remove Programs->Winbond WLAN** under Windows environment. Then click **"Remove"**.



2. On the next screen, click "**Next**" button to accept automatically uninstall for Wireless LAN Driver.



3. Click "**Finish**" button.

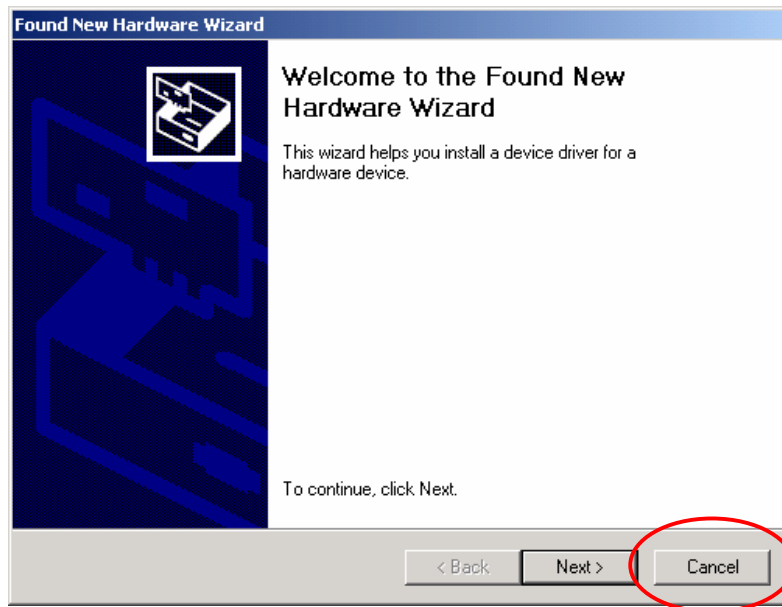


4. The USB Wireless Adapter can now be safely removed from the system when the un-installation is done.

Windows 2000

Install the Wireless Adapter Driver and Utility

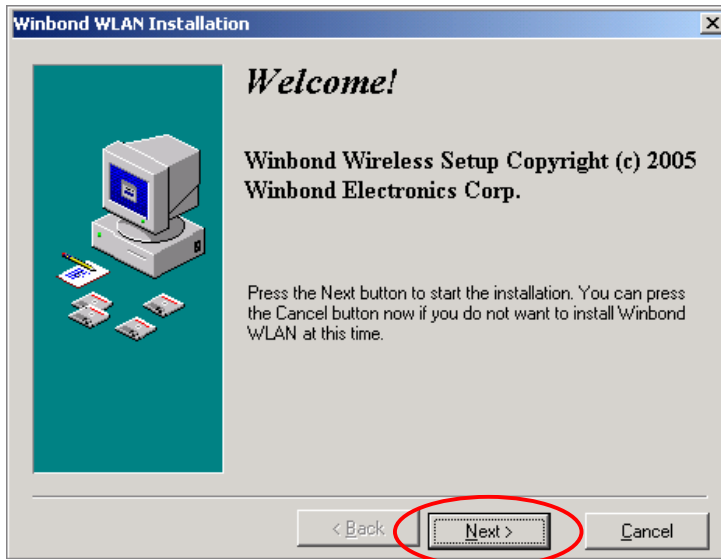
1. After you have installed the Wireless Adapter your computer will display a **Found New Hardware Wizard** screen, click "**Cancel**" to continue.



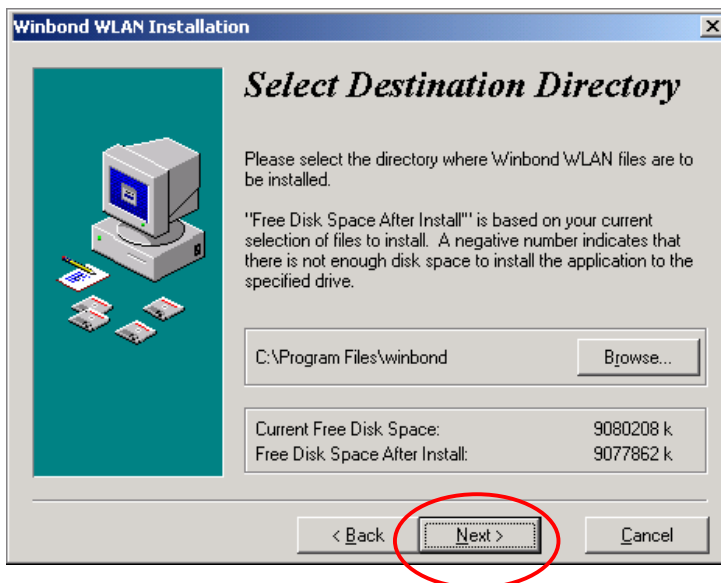
2. Insert Installation CD into your CD-ROM; then the installation will be activated automatically. If not, double-click on "**w89c35.EXE**" on the installation CD.



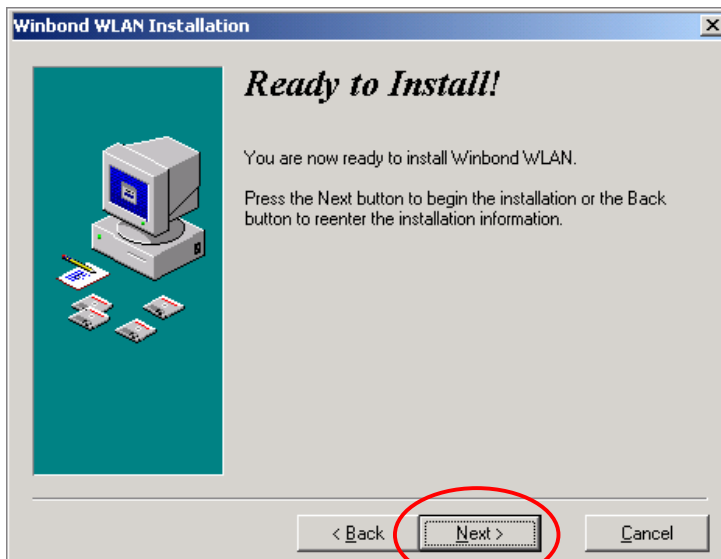
3. **Winbond Wireless Setup** will install the driver and utility on your system, click **"Next"** to continue.



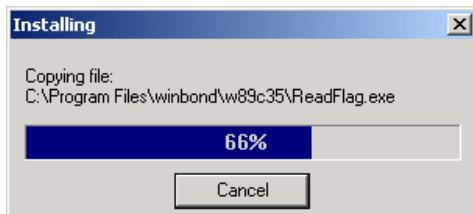
4. On the **Select Destination Directory** screen, click **"Next"** to accept the Destination Directory for driver installation.



5. Press the "Next" button to begin the installation.



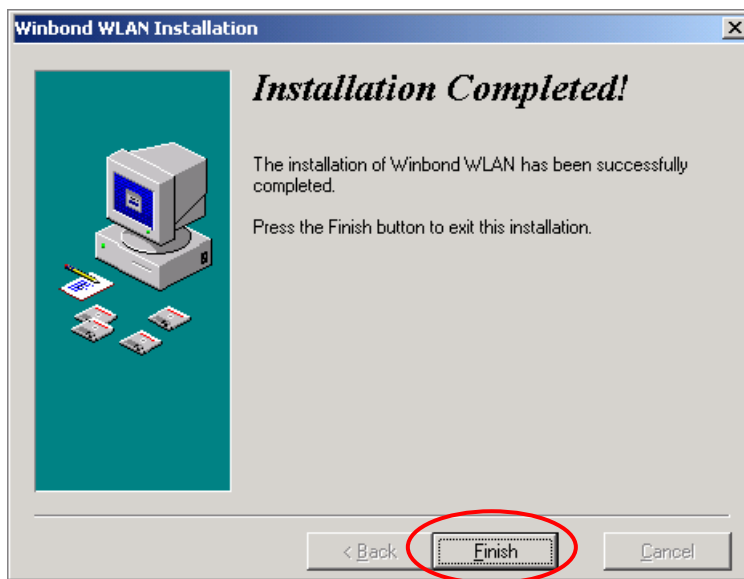
6. Wireless Adapter Driver and Utility are installing.




7. A dialog saying "Digital Signature Not Found" might appear to warn you that the device hasn't got Microsoft Digital Signature. Select "Yes" to continue the installation, the software has been tested and proved to work correctly with Windows.



8. The installation is now complete, please click "**Finish**".

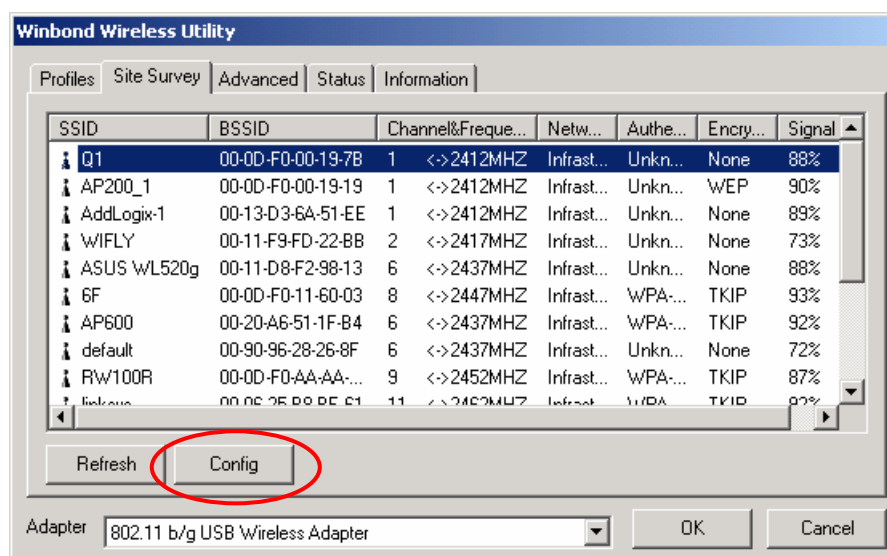


Configuring the Wireless Utility

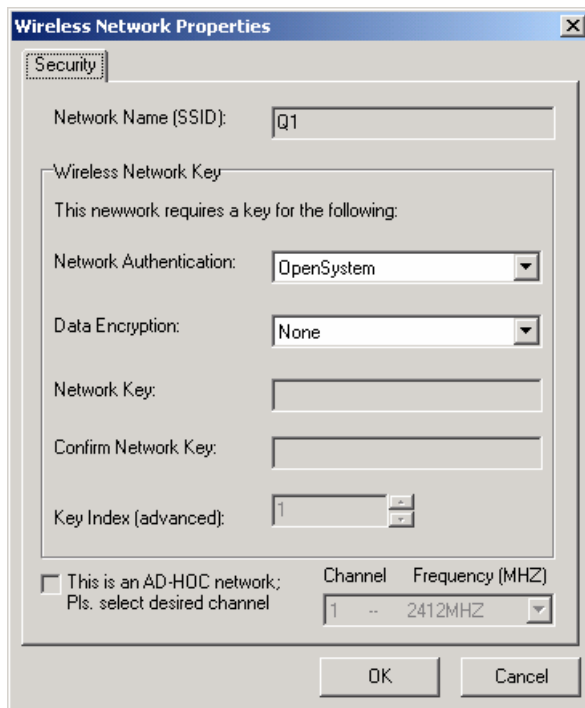
1. Double-click the utility icon  in your system tray to begin the utility configuration.



2. Select **Site Survey** Tab, all available Access Points would be listed. Click on the desired Access Point, and click "**Config**" button for Wireless configuring.

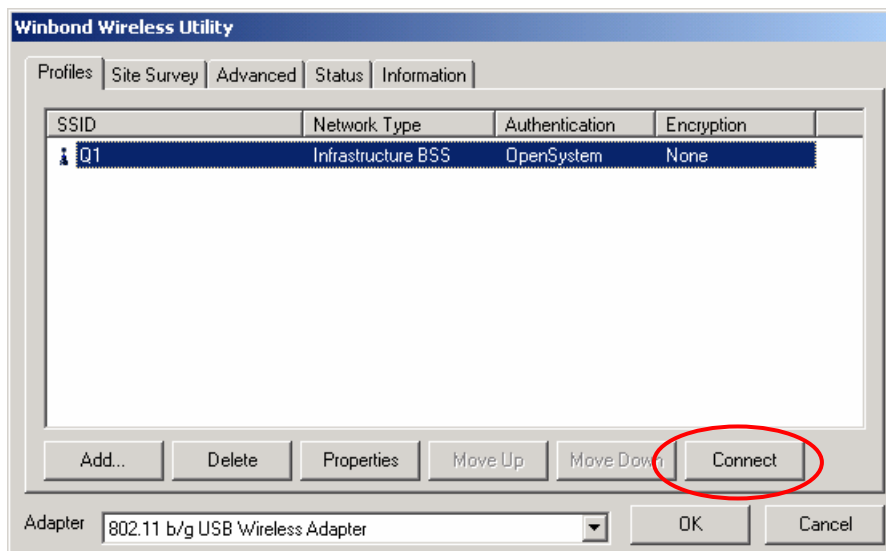


3. On the **Wireless Network Properties** screen, you may set Network Name (SSID), Wireless Network Security Key or AD-HOC network.



The **Wireless Network Properties** dialog box is shown with the **Security** tab selected. The **Network Name (SSID)** is set to "Q1". Under the **Wireless Network Key** section, it states "This network requires a key for the following:". The **Network Authentication** is set to "OpenSystem" and **Data Encryption** is set to "None". There are empty text boxes for **Network Key** and **Confirm Network Key**. The **Key Index (advanced)** is set to "1". At the bottom, there is a checkbox for "This is an AD-HOC network; Pls. select desired channel". To the right, there are fields for **Channel** (set to "1") and **Frequency (MHZ)** (set to "2412MHZ"). **OK** and **Cancel** buttons are at the bottom.

4. Click on the desired profile, and click the **"Connect"** button to take effect.



The **Winbond Wireless Utility** window is shown with the **Profiles** tab selected. It contains a table with the following data:

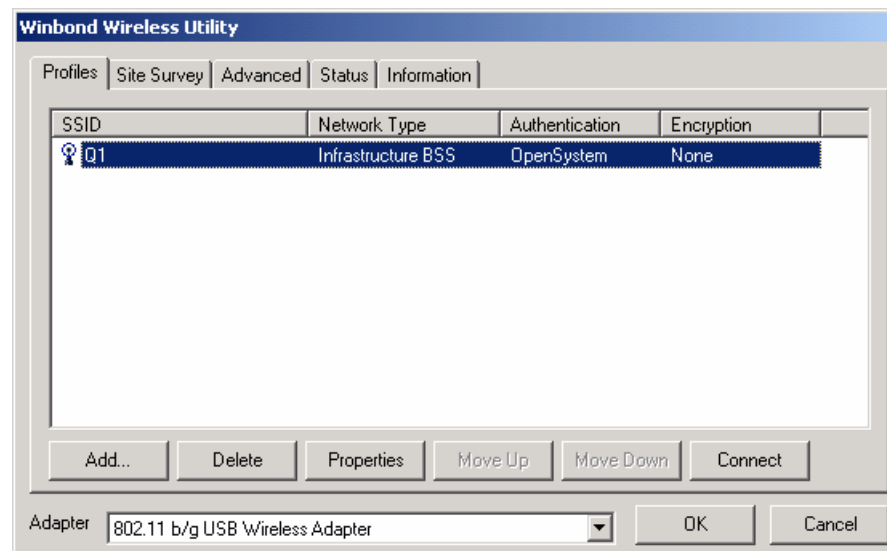
SSID	Network Type	Authentication	Encryption
Q1	Infrastructure BSS	OpenSystem	None

Below the table are buttons: **Add...**, **Delete**, **Properties**, **Move Up**, **Move Down**, and **Connect**. The **Connect** button is circled in red. At the bottom, there is a dropdown for **Adapter** (set to "802.11 b/g USB Wireless Adapter") and **OK** and **Cancel** buttons.

Configuration

● Profile

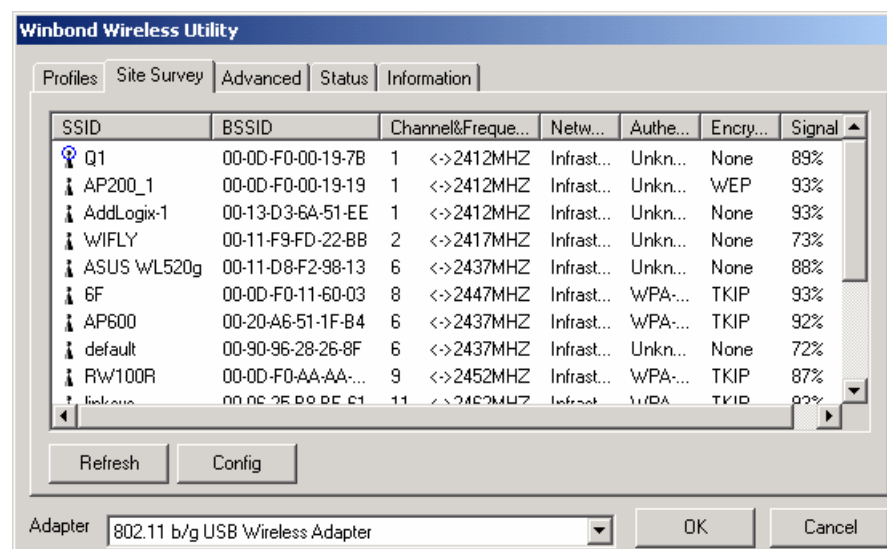
The **Profile Tab** allows you to set values for all parameters by selecting a previously defined profile. To create a profile, click **Add**, type a profile name and set the corresponding parameters. If one of the profiles is no longer used, you may remove it by clicking the **Delete** button. After changing parameters, click the **Connect** button to take effect. You can have multiple profiles and modify the profile at any time.



● Site Survey

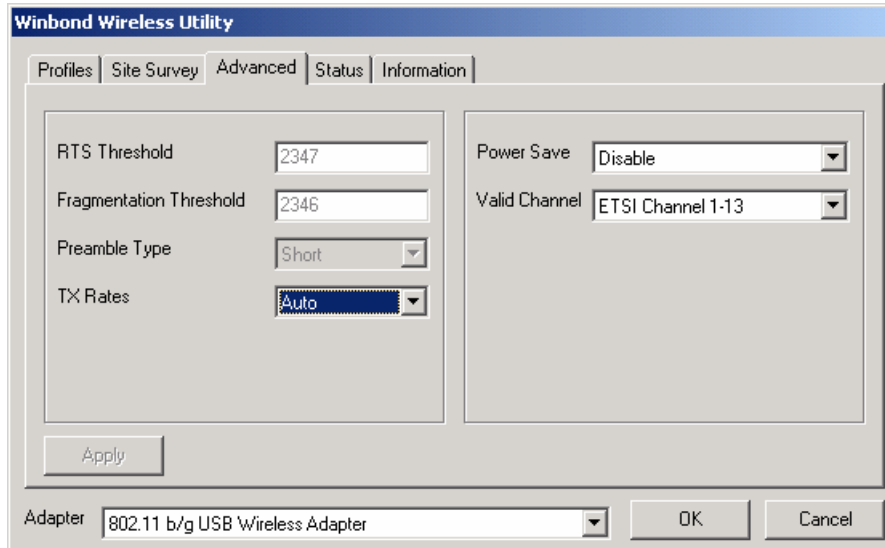
Site Survey Tab lists the features of the available Access Points within range of the Wireless Adapter's signal.

Click on the desired Access Point, and click **Config** for Wireless Configuration. You may click **Refresh** to refresh the list.



- **Advance**

The Configuration Utility also offers the advanced configuration for user to set the Wireless Adapter under certain network environment. These advanced options include RTS Threshold, Fragmentation Threshold, Preamble Type, Tx Rate, Power Save, and Valid Channel.



The image shows a screenshot of the 'Winbond Wireless Utility' window, specifically the 'Advanced' tab. The window has a title bar with the text 'Winbond Wireless Utility'. Below the title bar are five tabs: 'Profiles', 'Site Survey', 'Advanced' (which is selected), 'Status', and 'Information'. The main area of the window is divided into two columns. The left column contains four settings: 'RTS Threshold' with a text box containing '2347', 'Fragmentation Threshold' with a text box containing '2346', 'Preamble Type' with a dropdown menu showing 'Short', and 'TX Rates' with a dropdown menu showing 'Auto'. The right column contains two settings: 'Power Save' with a dropdown menu showing 'Disable', and 'Valid Channel' with a dropdown menu showing 'ETSI Channel 1-13'. Below these settings is an 'Apply' button. At the bottom of the window is a dropdown menu labeled 'Adapter' showing '802.11 b/g USB Wireless Adapter', and two buttons labeled 'OK' and 'Cancel'.

Setting	Value
RTS Threshold	2347
Fragmentation Threshold	2346
Preamble Type	Short
TX Rates	Auto
Power Save	Disable
Valid Channel	ETSI Channel 1-13

- **Status**

Network Name

The field shows the association status to available Access Point with SSID of the Access Point.

Link Status

Shows the whether the link is Connect or Disconnected.

Current Channel

Shows the channel on which the connection is made.

Current Speed

Shows the highest transmit rate of the current association.

Link Quality / Signal Strength

The Link Quality and Signal Strength bar graph is only active when the node is in Infrastructure Mode. The bar graph displays the quality and strength of the link between the node and its Access Point.

Signal Noise

This displays the noise level of the link between the node and its Access Point.

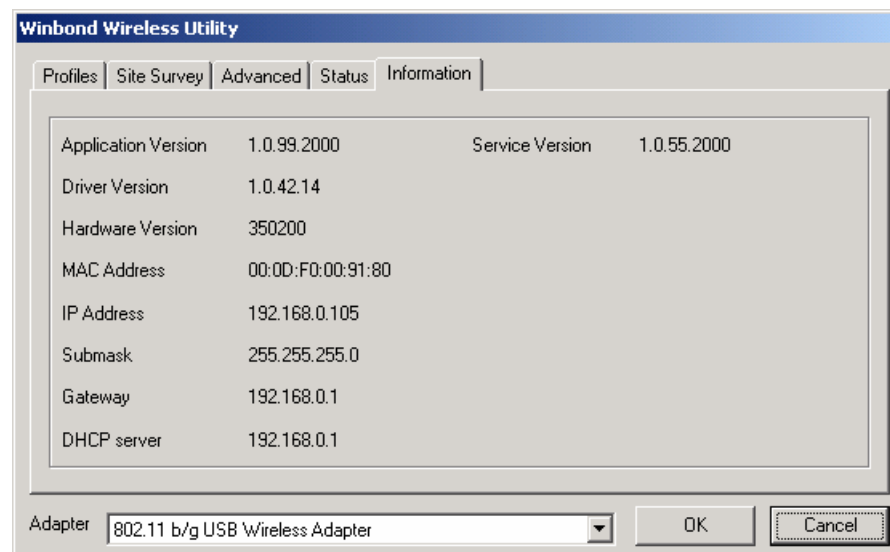
The image shows a screenshot of the 'Winbond Wireless Utility' window. It has a tabbed interface with 'Profiles', 'Site Survey', 'Advanced', 'Status', and 'Information'. The 'Status' tab is selected. The window displays various network parameters:

- Network Name:** Q1
- Link Status:** Connected
- Current Channel:** 1
- Current Speed:** 54.0M
- Link Quality:** Represented by a bar graph with 10 bars, all filled, indicating 99%.
- Signal Strength:** Represented by a bar graph with 10 bars, all filled, indicating -59dBm.
- Signal Noise:** Represented by a bar graph with 10 bars, the first bar is filled, indicating -94dBm.
- Frames Table:**

Frames	Tx	Rx
Successful	11	4
Unsuccessful	0	0
Throughput	330 B/s	46 B/s
- Radio Control:** Radio On (selected) and Radio Off (unselected) buttons.
- Buttons:** Reset, Apply, OK, and Cancel.
- Adapter:** 802.11 b/g USB Wireless Adapter (selected in a dropdown menu).

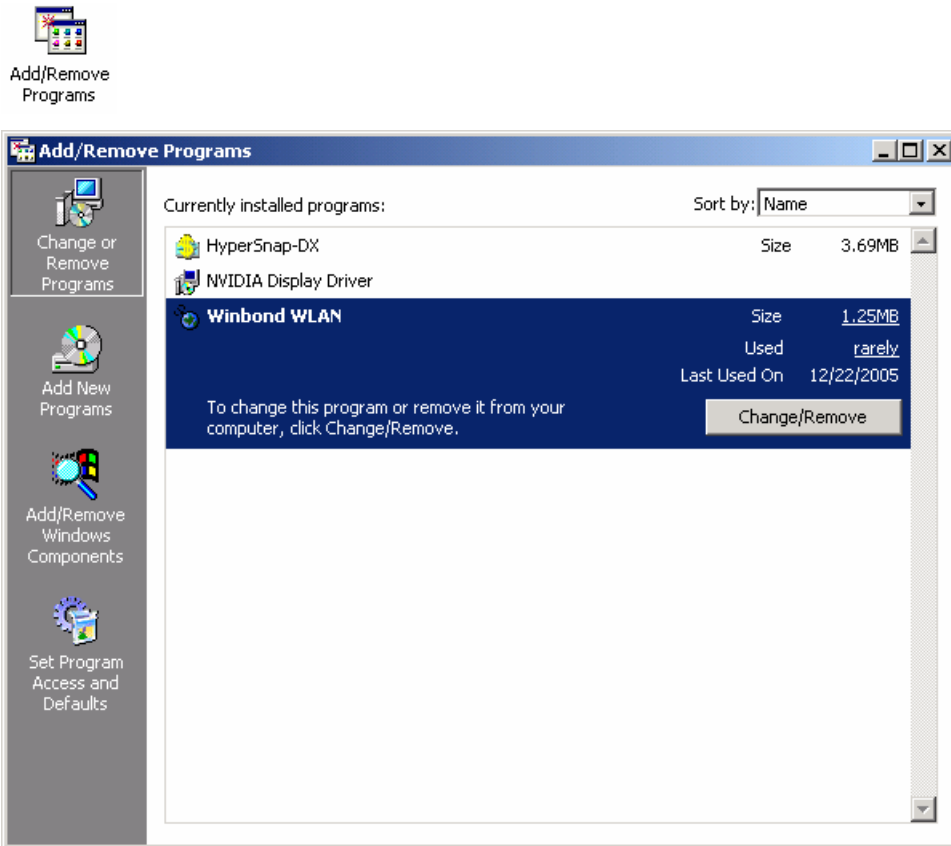
Information

About Tab shows the product version including the detail of Configuration Utility, Driver, and NIC MAC Address.

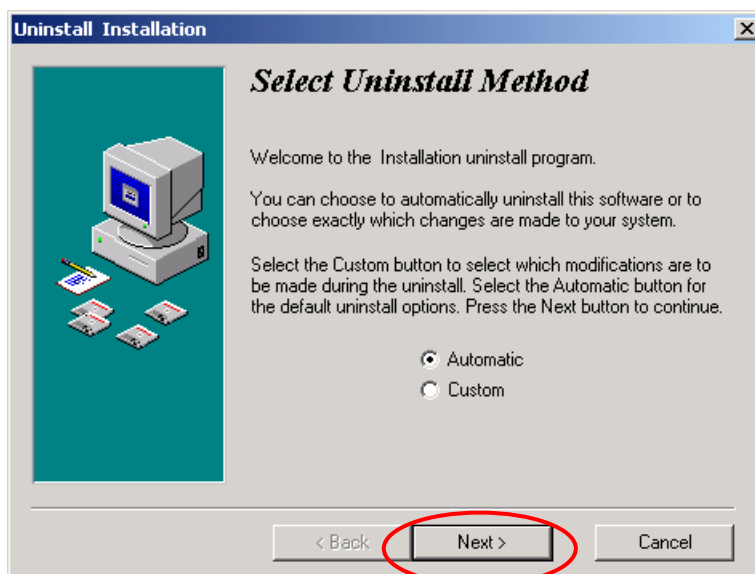


Uninstalling the Wireless Adapter Driver and Utility

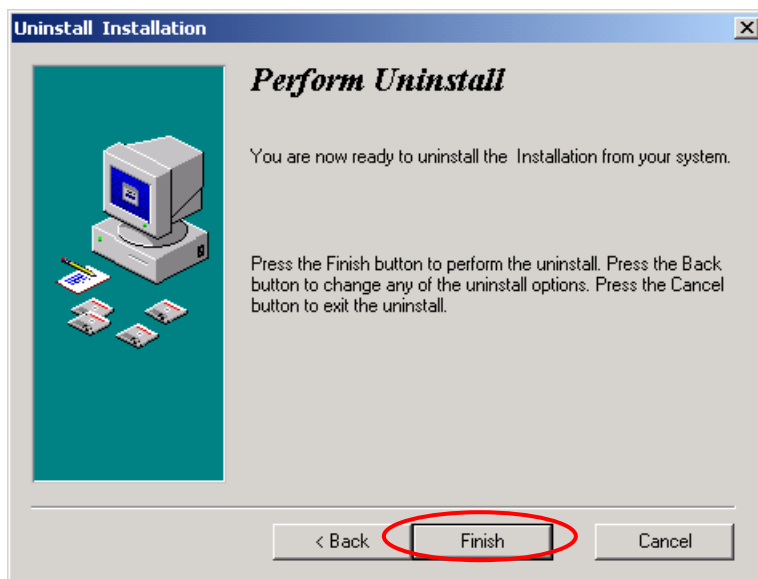
1. For uninstalling the Wireless Adapter, please go to: **Start->Settings->Control Panel->Add or Remove Programs->Winbond WLAN** under Windows environment. Then click **"Remove"**.



2. On the next screen, click **"Next"** button to accept automatically uninstall for Wireless LAN Driver.



3. Click "**Finish**" button.



4. The USB Wireless Adapter can now be safely removed from the system when the un-installation is done.

Trouble shooting

PING

This section discusses possible solutions using ping command to find your problem if you can't connect to the network.

- 1.** Check if you have a valid IP address
- 2.** Test if your TCP/IP works. Under MS-DOS (command prompt), type “ping localhost”. If you didn't receive a reply, then you need to re-install your TCP/IP. Proceed to next step if you have received replies.
- 3.** Using the same procedure, try to ping your Wireless Adapter's IP. If the Ping command fails, check the following:
 - Your WLAN is connected
 - Check that your driver is correctly installed.

Checking Valid IP Addresses

There are restrictions on which IP and addresses you can and cannot use. Some IP addresses are reserved for testing, multicasting and some IP are restricted by your ISP.

Following IP addresses **cannot** be used:

- **127.x.x.x** – this is a loop back address, used for testing
- **0.0.0.0** – this IP address represent the host address
- **255.255.255.255** – this is local broadcast address
- First portion of IP cannot exceed 224, that is, IP addresses which is in the range of 224~239.x.x.x is not valid. This range of IP is for multicasting. IP range from 240~255.x.x.x are reserved IP addresses and cannot be used.
- 0 or 255 in host ID portion of your IP are not valid. This represent local host or broadcast address for your class of IP

IP has five classes, namely class A, B, C, D and E. For each class, the host ID portion in the IP field is different for each of the classes. Figure below illustrate this.

Class A:	1 ~ 127.	Host ID
Class B:	128 ~ 191.	X. Host ID
Class C:	192 ~ 223.	X. X. Host ID
Class D:	224 ~ 239.	Used for Multicasting (no Host ID)
Class E:	240 ~ 255.	Reserved IP address

Host ID cannot be all 0's or all 255's.

Note: X denote don't cares in the above example.